

Applicant: T. Okumura, et al.
U.S.S.N.: 10/082,466
Response to Office Action
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Amendment to the Drawings

The attached sheet of drawings includes changes to Fig.2. This sheet replaces the original sheet including Fig. 2.

REMARKS

Applicants appreciate the Examiner's thorough examination of the subject application and request reconsideration of the subject application based on the foregoing amendments and the following remarks.

Applicants also acknowledge with thanks the personal interview with the Examiner which clarified the Examiner's concerns and thereby focused Applicant's amendments to the claims and drawing figures.

Claims 1-20 are pending in the subject application.

Claims 1-20 stand rejected under 35 U.S.C. §102, 35 U.S.C. §103, and/or 35 U.S.C. §112, first paragraph. Claims 13/7/1; 14/8/2; 15/9/3/1; 16/10/4/2; 17/11/5/3/1; 18/12/6/4/2; and 20 stand rejected on non-statutory obviousness-type double patenting grounds. Claims 13-18 were objected to because of identified informalities.

Claims 1 and 2 were amended so certain language in the wherein clause concluding each claim is more structural in nature. Claims 1 and 2 also were amended in the interests of advancing prosecution so the phraseology "throughout the data recording area" now reads as --in the data recording area--. Applicants consider this amendment to be one of clarification and not for overcoming the rejection as explained hereinafter.

The amendments to the claims are supported by the originally filed disclosure.

The Title of the invention was objected to and correction required. Applicants have amended the Title to address the Examiner's objection.

The specification and drawing figures were objected to because of the phrase "throughout the data recording area" found in the claims. Applicants discussed the phrase in question with the Examiner during the personal interview; and it was agreed that the term "throughout" would be understandable to those skilled in the art and also in view of the further explanation the phrase was supported by the subject application. Further and as indicated above, each of claims 1 and 2

were amended so the phrase now reads as --in the data recording area-- so the objectionable language no longer appears in the claims.

Notwithstanding the foregoing and in the interests of advancing prosecution and for clarity, Applicants amended Fig. 2 herein to show schematically the presence of long and short marks in the information/data recording area in the manner suggested by the Examiner. In view of this amendment, the specification also was amended to include a reference numeral to identify the long and short marks referred to in the description.

The amendments to the specification and drawing figures do not introduce new matter because they either are editorial in nature or are supported by the originally filed disclosure.

35 U.S.C. §112, FIRST PARAGRAPH REJECTIONS

Claims 1-12 stand rejected under 35 U.S.C. §112, first paragraph, because the subject application fails to provide a written description of what has been referred to as the “ultimate” wherein clause in the Office Action. Applicants respectfully traverse.

In claim 1, Applicants claim an optical reproducing device that includes a predetermined length mark signal measurement means and a power control means. The predetermined length mark signal measurement means of claim 1 provides that it measures the reproduction signal characteristics respectively of *a short reproducing power control mark and of a long reproducing power control mark* from information data that are recorded in a data recording area of a sector of an optical recording medium. Also, the power control means of claim 1 controls the reproducing power of a light beam based on the measured reproduction signal characteristics of the *short and long reproducing power control marks*.

In sum, from the foregoing it can be seen that optical reproducing device of claim 1 does *not exclude* the predetermined length mark signal measurement means from measuring long power control marks and also does *not provide* that the power control means controls the

reproducing power of a light beam based only on the measured reproduction signal characteristics of a short power control mark.

The wherein clause of claim 1 does further modify the predetermined length mark signal measurement means as to how it functions with respect to the short power control marks; however, the wherein clause does not alter the claim as to the previously recited structure namely that the predetermined length mark signal measurement means measures both long and short reproducing power control marks as discussed above. Specifically, pre-amended claim 1 had provided that the predetermined length mark signal measurement means is further operable to detect a specific pattern that includes an arrangement of a plurality of short reproducing power control marks from the bit arrangement pattern of the information data in the data recording area. It is further provided that when such a specific pattern is detected, the predetermined length mark signal measurement means measures the reproduction signal characteristic of only the short reproducing power control marks that are included in the specific pattern. Thus, the wherein clause does not exclude the measurement of the long power control marks by the predetermined length mark signal measurement means, it merely includes language as to when the short reproducing power control marks are to be measured.

As indicated above, claim 1 was amended for clarity. Specifically, the Examiner had indicated that certain of the language of the wherein clause was believed to be functional in nature and thus suggested that the wherein clause be amended so that the language was more structural. Accordingly, the wherein clause of claim 1 was revised to provide that the predetermined length mark signal measurement means further includes a pattern detection means for detecting a specific pattern including therein an arrangement of a plurality of short reproducing power control marks from amongst a bit arrangement pattern of the information data in the data recording area, and when the specific pattern is detected, to measure the reproduction signal characteristic of short reproducing power control marks, the measured reproduction signal characteristic of short reproducing power control marks corresponding only to the plurality of short reproducing power control marks included in the specific pattern. It is respectfully

submitted that such an amendment further supports the arguments above regarding the language of the pre-amended claim.

Therefore, Applicants believe that the within rejection has been overcome and thus, request that the rejection under §112, first paragraph be withdrawn.

Accordingly, claims 1-12 satisfy the requirements of 35 U.S.C. §112, first paragraph and, therefore, these claims are allowable.

OBVIOUSNESS DOUBLE PATENTING REJECTION

Claims 13/7/1; 14/8/2; 15/9/3/1; 16/10/4/2; 17/11/5/3/1; 18/12/6/4/2; and 20 stand rejected under the judicially created doctrine of obviousness type double patenting as being unpatentable over claims 1, 4 and 7 of U.S. Patent No. 6,288,992 (“the ‘992 patent”). It is further asserted in the Office Action that while the conflicting claims are not identical that are not patentably distinct from each other. Applicants respectfully traverse.

As previously indicated by Applicants, none of the identified claims of the ‘992 patent discloses, teaches or suggests a predetermined length mark signal measurement means for measuring reproduction signal characteristics respectively of a short reproducing power control mark and of a long reproducing power control mark *from information data* that is recorded throughout a data recording area (*i.e.*, in the data recording area) of a sector of an optical recording medium. In particular, the identified claims of the ‘992 patent do not disclose, teach or suggest a predetermined length mark signal measurement means that is further operable to detect (*i.e.*, including the pattern detection means) a specific pattern including therein an arrangement of a plurality of short reproducing power control marks from amongst a bit arrangement pattern of the information data in the data recording area, and when the specific pattern is detected, to measure the reproduction signal characteristic of only the short reproducing power control marks included in the specific pattern. Further, the identified claims of the ‘992 patent do not provide any teaching motivation or suggestion to modify the invention of the identified claims so as to

produce the invention as set forth in claim 1. Moreover, the Office Action fails to identify another document that provides such a teaching, suggestion or motivation to one skilled in the art to so modify the claims of the '992 patent and also fails to provide a detailed basis why one skilled in the art would have been motivated to amend the invention of the identified claims of the '992 patent.

As to the assertion in the Office Action that the third embodiment in the '992 patent allegedly shows recording of long and short control marks in a data recording area, Applicants respectfully disagree. The discussion in col. 31 lines 54-64 and col. 32, lines 40-47 of the '992 patent clearly indicates that *NO* marks for reproducing power control are recorded in the magneto-optical disk. As to the other embodiments described in the '992 patent, the long and short control marks are recorded in long and short recording domains respectively that are clearly separate and apart from the data recording area (*e.g.*, see figures 2-3 and 20-21 thereof).

In addition to the above remarks, Applicants also offer the following further observations regarding claims 13-18. Claims 13-18 provide that the predetermined length mark signal measurement means measures reproduction signal characteristics corresponding only to the short reproducing power control mark included in the specific pattern, and that the reproduction condition control means is provided. These limitations are not recited in any of the claims in the '992 patent nor described in the description thereof. Further, claim 13 recites measuring a ratio between amplitude values of the short and long reproducing power control marks, and controlling the reproducing power of the light beam so that the measured amplitude ratio gets close to a target value. This is different from controlling the reproducing power of the first control signal light beam that is generated from a ratio of two mean values as is described in the '992 patent.

Claim 20 of the present invention recites measuring respective reproduction signal characteristics corresponding to short reproducing power control marks included in the specific pattern, and calculating a mean value using the measured reproduction signal characteristics. On the other hand, claim 4 of the '992 patent recites generating a control signal based on a ratio of

two mean values that are calculated based on the respective amplitude values of the reproduction signals corresponding to two kinds of recorded marks. The limitation in claim 20 of the present invention is therefore different from the limitation of claim 4 of the '992 patent.

In view of the foregoing remarks, Applicants respectfully submit that claims 13/7/1; 14/8/2; 15/9/3/1; 16/10/4/2; 17/11/5/3/1; 18/12/6/4/2; and 20 differ substantially from the claims of the '992 patent and also are not described in the description of the '992 patent. Thus, withdrawal of the rejection on the ground of non-statutory obviousness-type double patenting is respectfully requested.

Therefore, Applicants respectfully submit that in view of the foregoing remarks, claims 13/7/1; 14/8/2; 15/9/3/1; 16/10/4/2; 17/11/5/3/1; 18/12/6/4/2; and 20 are allowable.

35 U.S.C. §103 REJECTIONS

Claims 1-18 stand rejected under 35 U.S.C. §103 as being unpatentable over Applicants Admitted Prior Art (AAPA) in view of Tanaka et al. and all further considered in view of Okumura et al. [USP 6,288,992; "Okumura '992"]. Applicants respectfully traverse as discussed below. Because claims 1 and 2 were amended in the foregoing amendment, the following discussion refers to the language of the amended claims. However, only those amended features specifically relied upon to distinguish the claimed invention from the cited prior art shall be considered as being made to overcome the cited reference.

As indicated previously by Applicants, Tanaka merely teaches a specific test pattern. It also is clear from the discussion in Tanaka that the results of the test are not used in any way to setting of a power value. Therefore, there is no teaching, suggestion, or motivation, to combine the references in the fashion suggested in the Office Action so as to yield the claimed invention.

As also indicated previously and as provided above in regards to the non-statutory obviousness type double patenting rejection, no power control marks are recorded in the optical disk in the third embodiment of Okumura '992 patent. Further, in those embodiments in

Okumura '992 where power control marks are recorded in the optical disk, they are recorded in short and long mark recording domains that are separate and apart from the data recording area.

Therefore, Applicants respectfully submit that the optical reproducing device of claim 1 is distinguishable from the cited combination of references.

Applicants respectfully submit that the foregoing remarks regarding claim 1 also at least apply to distinguish the optical reproducing device of claim 2 from the cited combination of references.

Claims 3-18 each depends (directly or ultimately) from one of claims 1 or 2. Thus, each of claims 3-18 are considered to be allowable at least because of the dependency from an allowed base claim. This shall not be construed, however, as an admission that claims 3-18 are not separately patentable from the cited art.

It is respectfully submitted that for the foregoing reasons, claims 1-18 are patentable over the cited reference(s) and AIPA, and therefore satisfy the requirements of 35 U.S.C. §103. Thus, these claims are allowable.

CLAIM OBJECTIONS

Claims 13-18 were objected to as being in improper dependent form for failing to further limit the subject matter of a previous claim. Applicants respectfully traverses.

Applicants believe that the foregoing remarks regarding the §112, first paragraph rejections, clarify that the claims clearly set forth that the long reproducing control mark is being measured in claims 1 and 2. Therefore, Applicants believe that in view of these remarks as well as in view of the clarifying amendment to claims 1 and 2, that the objection to claims 13-18 is overcome.

In view of the foregoing remarks, claims 13-18 are considered to be acceptable.

SEPCIFICATION OBJECTIONS/AMENDMENTS

The Examiner objected to the specification (*e.g.*, the TITLE) and requested correction thereof. The following addresses the specific objections of the Examiner.

As indicated above, the TITLE has been amended in the foregoing amendment to address the Examiner's objections. As such, the TITLE, as amended, is considered acceptable.

The Examiner also objected to the specification because there did not appear to be any clear support for the phrase "throughout the data recording area" recited in the claims (see page 3 of the Office Action). Applicants respectfully traverse.

Applicants respectfully submit that one skilled in the art would have fully understood and comprehend the phrase used in the claims and the relation with the description of the originally filed application. In this regards Applicants offer the following clarification.

An optical reproducing medium is for recording digital data. As shown in Fig. 2 of the subject application, the optical recording medium of the present invention improves the utilization ratio by providing a sector with only an address area 101 and a data recording area 102. Thus, the optical reproducing medium of the present invention *does not include* a reproducing power control area such as that found when using a conventional technique. In the data recording area 102 for the optical recording medium of the present invention, a bit arrangement pattern of information data is recorded (see pages 10-11 of the subject application) as well as short and long control marks.

As described in the subject application, from the bit arrangement pattern of reproduced information data, a specific pattern including a short mark (2T mark, for example), and a long mark (8T mark, for example) are detected (see page 15 of the specification as filed). As described in the second paragraph on page 17 of the subject application, the reproduction operation for the optical recording medium is performed all over the data recording area 102 of the sector 100. Therefore and as described in the subject application, information data is recorded "throughout" the data recording area 102.

Applicants also would note that the customary and ordinary meaning of throughout includes, in or to every part and through or during the whole of, or in all parts of (see enclosed dictionary definitions). It is respectfully submitted that the use of the word “throughout” in the claims to describe how information data is recorded in the data recording area 102 is consistent with the description in the subject application as to the recording of information data in the data recording area.

Notwithstanding the foregoing, in the interests of advancing prosecution, Applicants amended claims 1 and 2 to provide that the information data is recorded “in” the data recording area and thus has eliminated use of the word throughout. Therefore, for this additional reason the specification objection directed to the phrase “throughout the data recording area” is believed to be overcome.

As also indicated above, Fig. 2 is amended in the foregoing amendment so as to include a schematic representation of short and long power reproducing power control marks as suggested by the Examiner. Thus, the specification was amended to include reference numerals to relate the discussion to the drawing figure.

It is respectfully submitted that the foregoing amendments to the specification do not introduce new matter as they either are editorial in nature or are supported by the originally filed disclosure.

It is respectfully submitted that for the foregoing reasons, the specification satisfies applicable Patent laws and rules and, therefore is considered acceptable.

DRAWING OBJECTIONS

The Examiner objected to drawing figures for the reasons provided on pages 2-3 of the above-referenced Office Action. Applicants respectfully traverse.

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Applicants believe that the foregoing remarks regarding the objections to the specification and those regarding the §112, first paragraph rejection have fully addressed the grounds for objection directed to the drawing figures.

Notwithstanding this and as indicated above, Fig. 2 is amended herein as suggested by the Examiner so that the data recording area 102 includes schematic representations of short and long marks.


In view of the foregoing remarks as well as amended Fig. 2, the drawing figures are considered acceptable and further correction is not required.

It is respectfully submitted that the subject application is in a condition for allowance. Early and favorable action is requested.

Applicants believe that additional fees are not required for consideration of the within Response. However, if for any reason a fee is required, a fee paid is inadequate or credit is owed for any excess fee paid, the Commissioner is hereby authorized and requested to charge Deposit Account No. **04-1105**.

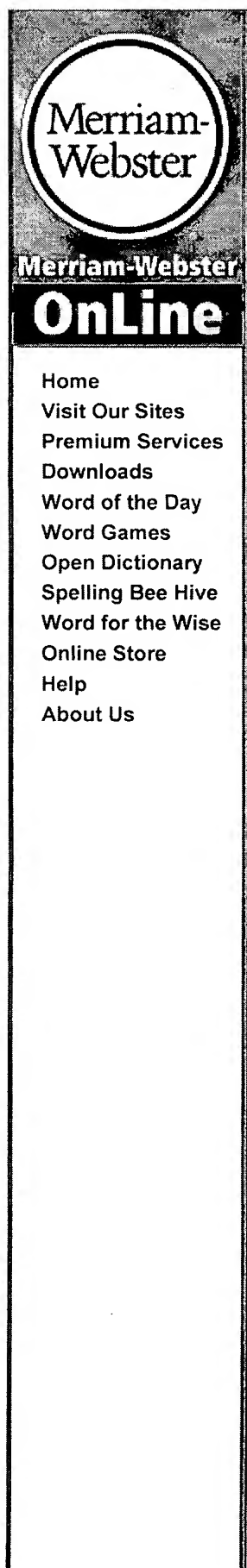
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To select an entry, click on it.

throughout[1,adverb]
throughout[2,preposition]

Go

Main Entry: **¹through·out**

Pronunciation: thrü-'aut

Function: *adverb*

1 : in or to every part : **EVERYWHERE** <of one color *throughout*>

2 : during the whole time or action : from beginning to end <remained loyal *throughout*>

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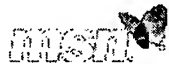
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► **throughout**
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throughway
throve
throw
throw away
throw in
throw-in
throw off



throughout

throughout

through·out [throo ówt]

preposition,

adverb

Definition:

1. through whole of: through or during the whole of

- *Societies throughout history believed they had reached the frontiers of human accomplishment.*
- *Throughout, they maintained their dignity.*

2. in all parts of: happening or existing in all parts of

- *The group is seeking experts of any age throughout the area.*
- *The house is carpeted throughout.*

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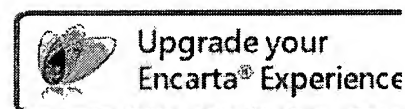
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